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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,042	02/28/2002	W. T. Gurnee	383-9U1	6477

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ONE COMMERCE SQUARE  
2005 MARKET STREET, SUITE 2200  
PHILADELPHIA, PA 19103

EXAMINER

LEWIS, AARON J

ART UNIT PAPER NUMBER

3743

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/087,042

Applicant(s)

GURNEE ET AL.

Examiner

AARON J. LEWIS

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03/10/2005 (AMENDMENT).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3,10,11,16-20 and 35-37 is/are allowed.
- 6) ☒ Claim(s) 1,4-9 and 12-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gamow ('678) in view of Holm et al. ('009), Lake ('180) and Smith ('339).

The differences between Gamow and claim 1 are an oxygen concentration measuring apparatus for monitoring a concentration of oxygen in the gas; and an environmental control apparatus for controlling the temperature of the gas in the vessel, the oxygen concentration measurement apparatus including an oxygen analyzer coupled to one of an electronic and an electro-chemical oxygen concentration sensing unit that provides an electrical signal representative of the concentration of oxygen in the gas to the oxygen analyzer, the analyzer displaying an indication of oxygen concentration based on the electrical output signal.

Holm et al. (fig.12) teach an oxygen concentration measuring apparatus for monitoring a concentration of oxygen in the gas (88a) for the purpose of controlling the oxygen content of gas that is continually rebreathed (col.1, lines 16-20).

It would have been obvious to modify the hyperbaric chamber of Gamow to include a means for monitoring oxygen concentration because it would have provided a means

for controlling the oxygen content of gas that is continually rebreathed as taught by Holm et al..

Lake teaches an environmental control apparatus (33 and page 3, lines 15-38) for controlling the temperature of the gas in the vessel (1) for the purpose of maintaining the temperature of chamber within predetermined limits (page 3, lines 30-38).

It would have been obvious to modify the hyperbaric chamber of Gamow to include an environmental control apparatus for controlling the temperature of the gas in the vessel because it would have provided a means for maintaining the temperature of the chamber within predetermined limits as taught by Lake.

Smith teaches the oxygen concentration measurement apparatus including an oxygen analyzer (43) coupled to one of an electronic (col.2, lines 38-62) and an electro-chemical oxygen concentration sensing unit that provides an electrical signal representative of the concentration of oxygen in the gas to the oxygen analyzer, the analyzer displaying (65) an indication of oxygen concentration based on the electrical output signal for the purpose of automatically maintaining a preset oxygen concentration within the atmosphere surrounding a patient (col.1, lines 11-14).

It would have been obvious to further modify the oxygen monitoring means of Gamow as modified by Holm et al. to include any well known type of oxygen monitoring means including one having a capability of displaying the oxygen concentration because it would have provided medical personnel with an automatic indication of exactly what the oxygen concentration is at all times.

As to claim 4, while Gamow as modified by Lake does not expressly teach a heat pump for heating and cooling the breathable air, the heating/cooling tank (33 of Lake) does include a fluid (i.e. hot water or ammonia) from which heat is gained or lost by the breathable gas; consequently, it would have been obvious to further modify the heating/cooling tank of Lake to employ a heat pump as one well known means for heating and cooling a fluid for another. Gamow (col.8, lines 49-52) discloses a carbon dioxide scrubber (10) and a blower (11) located within the vessel and in communication with the breathable gas.

As to claim 5, Gamow (col.8, lines 39-55) discloses a pressure regulator including a pressure controlling valve (14) for regulating a flow of pressurized gas into the vessel such that the pressure within the vessel is maintained within a predetermined range.

As to claims 6-9, Gamow discloses a gas compressor (9) including an intake and outtake, the intake and outtake being typical of any compressor. Official notice is taken that mufflers are commonly used on compressors to quiet their operation. It would have been obvious to modify the compressor of Gamow to incorporate such a muffler including one having HPDE as its operative material to quiet its operation thereby making the device more desirable to work with.

3. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gamow ('678) in view of Lake ('180) and Smith ('339).

The difference between Gamow and claim 12 is a heat pump external to the pressure chamber in fluid communication with a heat exchanger by a conduit having an exchange fluid therein and a temperature sensor in fluid communication with the gas in

Art Unit: 3743

the vessel which provides an output representative of a temperature of the gas; and a temperature controller having an adjustable set point which receives the output of the temperature sensor and provides a control signal to the heat pump for adjusting the temperature of the exchange fluid to thereby maintain the temperature of the gas within a predetermined range of the set point, the temperature controller being configured to display a representation of the temperature sensed by the temperature sensor and the adjustable set point.

Lake teaches an environmental control apparatus (33 and page 3, lines 15-38) for controlling the temperature of the gas in the vessel (1) for the purpose of maintaining the temperature of chamber within predetermined limits (page 3, lines 30-38).

It would have been obvious to modify the hyperbaric chamber of Gamow to include an environmental control apparatus for controlling the temperature of the gas in the vessel because it would have provided a means for maintaining the temperature of the chamber within predetermined limits as taught by Lake. While Gamow as modified by Lake does not expressly teach a heat pump for heating and cooling the breathable air, the heating/cooling tank (33 of Lake) does include a fluid (i.e. hot water or ammonia) from which heat is gained or lost by the breathable gas; consequently, it would have been obvious to further modify the heating/cooling tank of Lake to employ a heat pump as one well known means for heating and cooling a fluid for another.

Smith teaches the temperature controller (75 and col.3, lines 35-41) being configured to display a representation of the temperature sensed by the temperature sensor and the adjustable set point for the purpose of providing automatic thermostatic control of

Art Unit: 3743

the temperature of the environment surrounding the patient. Smith expressly discloses the use of a conventional thermostat. It is submitted that conventional thermostats include both a means for presetting a desired temperature and a means for displaying the actual temperature of the environment being controlled.

It would have been obvious to further modify the temperature control device of Lake to employ any well known type of temperature control including one providing a display of the temperature as taught by Smith.

As to claim 13, Gamow discloses a carbon dioxide adsorbing material (10) for removing carbon dioxide from the gas.

As to claims 14 and 15, Gamow discloses a blower (11) that is fluid communication with a source of pressurized gas within the pressure vessel. The particular type of blower can be arrived at through mere routine obvious experimentation and observation with no criticality seen in any particular type of blower including an injection blower. That is, the blower of Gamow would achieve the same results as an injection blower.

#### ***Allowable Subject Matter***

4. Claims 2,3,10,11,16-20,35-37 are allowed.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1,4-9,12-15 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

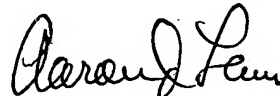
6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **AARON J. LEWIS** whose telephone number is (571) 272-4795. The examiner can normally be reached on 9:30AM-6:00PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **HENRY A. BENNETT** can be reached on (571) 272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
AARON J. LEWIS  
Primary Examiner  
Art Unit 3743

Aaron J. Lewis  
June 12, 2005